



Sommerfeld Theory Colloquium

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How Gravity Can Shape the Low-Energy Frontier of Particle Physics:
Neutrino Masses and the Domestic Axion

The most popular directions of model building beyond the Standard Model focus on new phenomena at short distances, corresponding to high-energy scales. As an alternative direction, we have developed a novel class of low-energy solutions to the neutrino mass and strong CP problems at a new infrared gravitational scale, which is numerically coincident with the scale of dark energy. In my talk, I will mainly focus on the neutrino mass model and discuss some of its phenomenological implications, in particular the weakening of the cosmological neutrino mass bounds and the distinction between Majorana and Dirac neutrinos through astrophysical neutrino decays.

This talk is based on 1602.03191, 1608.08969, 1811.01991,
and 1905.01264.

Wednesday, 18 December 2019, 16:45h, Room A348, Theresienstr. 37/III

Prof. G. Dvali